UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,486	11/20/2001	Reeny T. Sebastian	DP-304592/DE3-0214	9883

7590 07/30/2003

KEITH J. MURPHY
CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002

EXAMINER
BROADHEAD, BRIAN J

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/989,486	SEBASTIAN ET AL.
	Examiner	Art Unit
	Brian J. Broadhead	3661

-- The MAILING DATE of this communication appears on th cover she t with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☒ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 through 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoshi et al., US 2001/0004720 A1.

3. As per claims 1, 15, 16, 17, 18, 19, and 20, Hoshi et al. disclose receiving a plurality of signals indicative of the rear steering angle in paragraph 20; checking at least one of said plurality of signals to determine if it falls within a valid range in paragraph 20; correlating at least a first signal of the plurality of signals with at least a second signal of said plurality of signals to determine if either said first signal or said second signal is invalid in paragraph 20; and signaling a rejection of any of said plurality of signals is found to be invalid in paragraph 20.

4. As per claim 2, Hoshi et al. disclose comparing said first signal with an expected value at about an inflection point of said second signal in paragraph 51.

5. As per claim 3, Hoshi et al. disclose adding a second rear-wheel angle offset corresponding to said second signal in response to said comparing in paragraph 10.

6. As per claim 4, Hoshi et al. disclose subtracting a center value from said signal and multiplying a result of said subtracting by a scale factor in paragraph 13.

7. As per claim 5, Hoshi et al. disclose computing said expected value with a reference to a look-up table on paragraph 56.

8. As per claims 6 and 11, Hoshi et al. disclose computing said expected value by evaluating a continuous function in Figure 6A. The expected values are found from previous signals that are stored.

9. As per claim 7, Hoshi et al. disclose calculating a steering angle corresponding to one of said first signal and second signal so as to create a calculated angle in paragraph 52; and computing an expected value of the other of said first signal and said second signal in accordance with said calculated angle in paragraph 52.

10. As per claim 8, Hoshi et al. disclose comparing said expected value of said other of said first signal and said second signal in paragraph 52.

11. As per claim 9, Hoshi et al. disclose determining than any of said plurality of signals is invalid if said expected value and said actual value are not substantially equivalent in paragraph 52.

12. As per claim 10, Hoshi et al. disclose wherein at least one of said calculating and said computing further comprises using a look-up table in paragraph 56.

13. As per claims 12 and 13, Hoshi et al. disclose said plurality of signals comprises a plurality of signal components of a single carrier signal in paragraph 10; providing a single sensor having two signal outputs in paragraph 10.

14. As per claim 14, Hoshi et al. disclose comparing at least one of said plurality of signals with an upper limit and a lower limit in paragraph 56.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Bolzmann et al., US 2001/0016791 A1, disclose method for the detection of faulty installation of sensing devices in a vehicle.

17. Ding, 6594563, discloses method and device for monitoring a plurality of sensors detecting a process, notably for an ESP system for vehicles.

18. Fujimoto et al., 6577957, disclose apparatus and method for detecting abnormality in a position detection device.

19. Desbiolles et al., 6552534, disclose device for determining the absolute angular position of a turning component.

20. Kempen, 6502025, disclose relative steering angle sensor diagnostic for momentary signal dropout.

21. Leaphart, 6498971, disclose apparatus for determining steer angle of a motor vehicle.

22. Yazawa et al., 6429780, disclose failure detection method for a steering wheel sensor.

23. Forborgen, 6374941, discloses vehicle power steering system with digital angle sensing device.

24. Horton, 6364050, discloses electrical power assisted steering assemblies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 703-308-9033. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A. Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

BJB
July 27, 2003

WILLIAM A. CUCHLINSKI, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600